

# Keeping Track of Data May Become Big Industry

By Richard L. Lyons  
Staff Reporter

ONE OF THE MOST troublesome problems facing scientists today is that they know so much they can't keep track of it.

An estimated half million scientists are at work in the world today churning out new facts at a rate that doubles the world's scientific knowledge every eight years. About one million research papers are published each year in 100,000 technical journals in many languages.

No central brain exists to keep track of all this knowledge. A scientist may devote months of creative talent and large amounts of money seeking an answer already found. Some industries follow a rule that if a research project costs less than \$100,000, it is quicker and cheaper to work out the problem in the lab than to plow through the literature to find whether it already has been done.

A special House subcommittee which has been considering the problem heard the following examples of waste and duplication caused by uncoordinated knowledge:

- An American company spent over \$250,000 and five years of research in a successful attempt to solve an electronic switching problem important to military communications, only to discover the solution had been published six months before it began work.

- A cloud seeding experiment was made at a cost of \$3 million. The same work had been done earlier for \$250,000.

- One series of United States ballistic missile tests was delayed for several months while researchers worked out a special valve, only to discover the information was available before the research began.

- A manufacturing company paid over \$8 million for the invention of one of its products before it realized someone already had developed it.

Rep. Roman C. Pucinski (D-Ill.), chairman of the House study group, said all this "results in wasteful duplication of research estimated to be up to 50 per cent of our current \$15 billion effort in research and development." Two-thirds of these research costs are paid with Federal funds.

Pucinski has introduced a bill to establish a "national research data processing and information retrieval center." The idea is to assemble and file on perforated tape for handy reference an index to all the world's scientific information. Experts Pucinski borrowed from executive departments estimate it would cost \$100 million to set up the center and \$30 million or so a year to keep the data current.

If the work of all the world's scientists could be assembled, translated, catalogued and kept current, a researcher could push a button and either find the answer or determine that he has a job to do.

The work would not start from scratch. The U. S. Patent Office has over 7 million patents in its files. Many scientific groups catalogue information within their own fields. Some European countries, notably the Soviet Union, have set up data retrieval centers. The job for an all-knowing mechanical brain would be to assemble all this and whatever else is lying around loose.

Pucinski said he is convinced that the need for an orderly cataloguing of information will grow so rapidly and become so vital that within ten years "data processing and information retrieval will be one of the biggest industries in America and the world."

The Congressman said he first got interested in the subject as a possible new industry for the Midwest which has lost out on most of the space work. He hopes the center could be located in the Chicago area where he comes from.

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# CIA's Operations Remain a Secret To All but a Few

By Harry Ferguson  
United Press International

A story is going around that one day a top official of the Central Intelligence Agency (CIA) needed some information on the manager of a factory in the Soviet Union. He called for the files and, somewhat to his surprise, found all possible information about the man, including the fact that his mistress had dyed her hair three times. Different color every time.

It could be true, for the CIA has information about Russia that would shock Moscow. Each month the CIA buys or otherwise obtains 200,000 pieces of literature from Russia, the European Communist bloc and Red China. It has a translating computer that turns Russian into English at the rate of 30,000 words an hour. Nothing from Russia is too small to interest the CIA—railroad timetables, the pig population in the Ukraine, what movie is being shown in Kiev.

The CIA operates in a highly unorthodox fashion. It lists its number in the telephone book and everybody knows that its headquarters are at Langley, Va. But the CIA has plenty of secrets and keeps them well.

## Budget Kept Secret

There are perhaps a dozen men in Washington who know how much the CIA spends annually, but the best guesses are between \$400 million and \$1 billion. Nowhere in the Federal budget will you find any money allotted to the CIA.

Each year the CIA director appears before small panels made up of senior members of the Senate and House Appropriations Committees. He tells them how much money he needs, but doesn't have to explain how he is going to spend it. After the Congressmen O.K. the expenditure, the money is broken up into small items and salted and hidden throughout the Federal budget. An item for 1000 monkey wrenches in the Air Force budget could well be CIA money.

People who work for the CIA are divided into "overts" and "illegals." The "overts" work in the open, keep regular office hours and the only restraint they are under is

that they are forbidden to discuss the type of work they do. The "illegals" fan out across the world and operate in the full knowledge that if they are caught, they may forfeit their lives. One of the big battlegrounds of espionage is Berlin, and the West German government estimates there are 12,000 Soviet intelligence agents there. Nobody has any precise figures on the CIA strength in Berlin, but it can be assumed the situation is well covered.

## Becomes a New Man

The first thing that happens to a man when he becomes a CIA "illegal" is that he loses his identity. He gets a new name, a new birthplace and a new family. If he is going to operate in Italy, he not only must learn to speak flawless Italian, but in the precise accent of the province where he will be working.

Then he is "papered." He is equipped with every sort of document he could conceivably need in his new environment and he is taught how to manufacture new ones if the need arises.

The next thing is to arrange a "drop," a place where the agent can leave information and be sure it will wind up in Langley, Va.

The CIA's enemies see it as a sort of anonymous branch of the United States Government that is going around meddling in the internal affairs of both friendly and unfriendly nations. It is accused of helping make a complete botch of the Bay of Pigs invasion in Cuba and the events leading up to the present crisis in South Viet-Nam. Some persons even profess to see a threat to our own Government from an organization maintaining a sort of private army and operating in secrecy.

Allen Dulles, former CIA Director, denied all this in a recent television interview. He said the CIA never had jumped into a situation without getting the consent of the President. He also defended the necessity for secrecy by pointing out that Russia and Red China were pushing their espionage battles strongly and that you had to fight fire with fire.

## More Companies Turn To Experts to Clear Files, Store Records

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retained at least four years after the settlement. Heavily regulated companies tend to have fat files. The average major airline will likely have 10,000 cubic feet of files, enough to fill about 1,700 four-drawer file cabinets, compared with around 2,000 cubic feet for a large non-regulated company, Leahy's Mr. Cameron says.

When it enters a company that has not had its files cleaned for some time, Leahy often finds it can throw away about half the records without serious danger of losing something important. Such a housecleaning, coupled with new retention schedules and other changes, cut American Cyanamid Co.'s annual record-keeping costs by some \$85,000 a few years ago. Rental of space occupied by each office file cabinet, plus amortization of the cabinet's initial cost, was costing Cyanamid \$8.72 a year. Files in storage were costing \$2.76 annually per cabinet to keep. Leahy tossed out 54% of the storage records and destroyed or transferred to storage 26% of the office records.

Studies show that it costs about \$140 a year to maintain a four-drawer file cabinet, including file clerk salaries as well as space costs and cabinet amortization. One management consultant has estimated that of each 100 pieces of paper filed in the average well-run office only 20 will ever be called back for reference.

Leahy is specializing increasingly in helping companies retain records of the best thoughts of employees who are paid throughout their careers mainly to think. Often the memos, notes and other personal papers of scientists, lawyers and other professionals are lost to the company when the man retires or leaves, Mr. Cameron says. Leahy specialists currently are working with the research arm of a major oil company to try to draw important findings out of personal records and incorporate them into a central system which any researcher, tackling a problem, can draw upon. The same approach is being tried with several large law offices.

This information is often valuable even before a man leaves, since employees in some firms are known to labor hard on problems that lie solved in another employee's files, Mr. Cameron says.

## More Companies Turn To Experts to Clear Files, Store Records

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American Cyanamid Cuts Costs  
With New System; Federal  
Rules Add to Paperwork Bulk

By GEORGE MELLOAN

Staff Reporter of THE WALL STREET JOURNAL

NEW YORK—A few years ago investigations by Federal agencies forced Pan American World Airways to save all its records, instead of periodically destroying them. In four years the contents of Pan Am's files doubled and if all the papers it was saving had been piled in a single stack they might have scraped the wings of a jet flying at 25,000 feet.

With the investigations ended, the airline now has climbed out of its paper fogbank. But the speed and immensity of its file build-up illustrates why more and more companies are relying heavily on the file-clearing expertise of specialists called records managers or archivists.

With business booming, American office workers are generating letters, vouchers, order forms, bills of lading and hundreds of other documents at a rapid rate enough to fill an estimated 10 million file drawers a year. At the same time, many companies are moving into new office buildings where space is more expensive and where an excess of filing cabinets spoils the aesthetic effect office designers labored hard to achieve.

It's the records control specialist's job to see to it that outdated papers are tossed away, important ones kept on hand and papers that are neither useless nor important kept in some spot where they can be stored cheaply and gotten to if need be. At the same time, he strives to see to it that all information stored by the company, even in personal files, can be quickly obtained.

### Postwar Development

Systematic records management and disposal is largely a post-World War II development. Many companies have adopted it only in recent years. The National Records Management Council (NRMC), a non-profit research and advisory agency based in New York City, estimates that the number of specialists in the field, judging from membership in three professional associations, has more than doubled in the past decade.

Several firms, including Bekins Van & Storage Co. in Los Angeles, offer corporations a records storage service while many large firms have set up their own well-organized archives. Among them is the Bell System, which once estimated all its file cabinets together would make a row 50 miles long. NRMC says it has helped 400 major companies set up records control facilities in recent years.

"It would be rare to find any company doing in excess of \$100 million in business annually that has not done something in this field," says Christopher A. Cameron, president of Leahy Archives, Inc., and Leahy & Co., a two-pronged Manhattan-based enterprise which stores records and helps companies set up controls to keep files from ballooning.

Leahy's four records storage centers -- in New York City, Whitehouse, N.J., Elk Grove Village, Ill., and Miami, Fla. -- resemble high-stack libraries except that the stacks contain file boxes instead of books. Leahy has 150 clients, 60 more than five years ago, including Pan Am, Florida Power & Light Co., Metro-Goldwyn-Mayer, Inc., and Singer Manufacturing Co. Records on file in its Whitehouse center range from bank trust account ledgers dating back to 1852 up to such current materials as copies of payroll checks, which usually are tossed out after two years.

### Storage Schedules

Leahy archivists, working with the client, assign each type of record a "retention schedule" which sets a limit on how long it will be kept in storage. A very few, including most trust ledgers, are kept permanently. Some, such as extra copies of outgoing correspondence, are tossed out after six months. At Leahy storage centers workers see to it that disposal schedules are followed and also fish things out of their stacks to answer client inquiries. A large company, with 4,000 cubic feet of records, normally would pay between \$4,800 and \$5,500 a year for Leahy's storage and file management services, Mr. Cameron says.

To decide how long companies should keep each type of document, Leahy consultants use a number of guidelines. Some have been developed through research in various industries on such subjects as the elements of risk, say, in throwing out an employee's personnel records 10 years after he has left the company. But the most important guides are supplied by Federal and state governments in lists of rules on retention of records.

The Interstate Commerce Commission alone has 258 separate retention regulations for railroads, airlines and other carriers to follow. For instance, records of a damage claim must be

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